
ANNALS OF THE NEW YORK ACADEMY OF SCIENCES

Volume 499
June 15, 1987

HUMAN OBESITY^a

Editors and Conference Organizers
RICHARD J. WURTMAN AND JUDITH J. WURTMAN

CONTENTS

Introduction. <i>By</i> R. J. WURTMAN and J. J. WURTMAN	1
---	---

Part I. The Characteristics of Obesity

Characteristics of Obesity: An Overview. <i>By</i> A. P. SIMOPOULOS	4
Overweight Is Risking Fate: Definition, Classification, Prevalence, and Risks. <i>By</i> G. A. BRAY	14
An Anthropological Perspective on Obesity. <i>By</i> P. J. BROWN and M. KONNER	29
Childhood Obesity. <i>By</i> W. H. DIETZ JR.	47
Psychopathology and Obesity. <i>By</i> T. A. WADDEN and A. J. STUNKARD	55

**Part II. Cellular and Biochemical Changes Associated with Obesity:
Are They the Cause or the Result?**

Fat Cell Distribution and Metabolism. <i>By</i> P. BJÖRNTORP	66
Energy Utilization in Human Obesity. <i>By</i> E. JÉQUIER	73
Insulin Resistance and Amino Acid Metabolism in Obesity. <i>By</i> B. CABALLERO	84

Part III. Control of Calorie and Nutrient Intake in Humans

Exercise Effects on Calorie Intake. <i>By</i> F. X. PI-SUNYER	94
The Difference in the Storage Capacities for Carbohydrate and for Fat, and Its Implications in the Regulation of Body Weight. <i>By</i> J. P. FLATT	104

^aThis volume is the result of a conference entitled Conference on Human Obesity, held in New York City on June 19-21, 1986, by the New York Academy of Sciences.

Alterations in Nutrient Intake and Utilization Caused by Disease. By R. A. HOERR and V. R. YOUNG.....	124
The Effect of Gut Peptides on Hunger, Satiety, and Food Intake in Humans. By G. P. SMITH and J. GIBBS.....	132

Part IV. Control of Calorie and Nutrient Intake in Animals

Hypothalamic Neurotransmitters in Relation to Normal and Disturbed Eating Patterns. By S. F. LEIBOWITZ.....	137
Nutritional Manipulations for Altering Food Intake: Towards a Causal Model of Experimental Obesity. By J. E. BLUNDELL....	144
From Fenfluramine Racemate to <i>d</i> -Fenfluramine: Specificity and Potency of the Effects on the Serotonergic System and Food Intake. By S. GARATTINI, T. MENNINI, and R. SAMANIN	156
The Place of Animal Models and Animal Experimentation in the Study of Food Intake Regulation and Obesity in Humans. By R. W. FULLER and T. T. YEN	167
Dietary Treatments That Affect Brain Neurotransmitters: Effects on Calorie and Nutrient Intake. By R. J. WURTMAN	179
Regulation of Food Intake During Pregnancy and Lactation. By P. ROSSO.....	191

Part V. Disorders of Food Intake and of Mood and Their Relationship to Obesity

Disorders of Food Intake: Excessive Carbohydrate Snack Intake among a Class of Obese People. By J. J. WURTMAN	197
Induction of Obesity by Psychotropic Drugs. By J. G. BERNSTEIN ..	203
Disturbances of Appetite and Weight Regulation in Seasonal Affective Disorder. By N. E. ROSENTHAL, M. GENHART, F. M. JACOBSEN, R. G. SKWERER, and T. A. WEHR	216
Food Intake and Mood in Anorexia Nervosa and Bulimia. By B. T. WALSH, M. GLADIS, and S. P. ROOSE.....	231
Alcoholism: Is It a Model for the Study of Disorders of Mood and Consummatory Behavior? By T-K. LI, L. LUMENG, W. J. MCBRIDE, and J. M. MURPHY	239

Part VI. The Treatment of Obesity

Dietary Treatments of Obesity. By W. BENNETT	250
Mood and Food: A Psychopharmacological Enquiry. By T. SILVERSTONE.....	264

New Developments in Pharmacological Treatments for Obesity. <i>By</i> A. C. SULLIVAN, S. HOGAN, and J. TRISCARI.....	269
Pharmacological Treatments That Affect CNS Activity: Serotonin. <i>By</i> C. NATHAN and Y. ROLLAND.....	277
Centrally Active Peptides: Are They Useful Agents in the Treatment of Obesity? <i>By</i> A. S. LEVINE	297
Mechanical Treatment for Obesity. <i>By</i> J. F. MUNRO, I. C. STEWART, P. H. SEIDELIN, H. S. MACKENZIE, and N. G. DEWHURST.....	305
A New Approach to the Treatment of Obesity: A Discussion. <i>By</i> B. J. P. GUY-GRAND.....	313

Part VII. Poster Papers

Effects of an Intragastric Balloon on Body Weight, Food Intake, and Gastric Emptying Rate. <i>By</i> A. GELIEBTER, S. WESTREICH, D. GAGE, R. S. MCCRAY, and S. A. HASHIM	318
The Effect of the 5-HT Releasing Drug <i>d</i> -Fenfluramine and the 5-HT Receptor Blocker, Metergoline, on Food Intake in Human Subjects. <i>By</i> E. GOODALL and T. SILVERSTONE	321
The Major Affective Disorder in Anorexia Nervosa and Bulimia. <i>By</i> R. G. LAESSLE, S. KITTL, U. SCHWEIGER, M. M. FICHTER, and K. M. PIRKE	324
Effects of <i>l</i> -Tryptophan on Food Intake and Selection in Lean Men and Women. <i>By</i> L. A. LEITER, N. HRBOTICKY, and G. H. ANDERSON	327
Treatment of Seasonal Affective Disorder with <i>d</i> -Fenfluramine. <i>By</i> D. O'ROURKE, J. WURTMAN, A. BRZEZINSKI, T. ABOU- NADER, P. MARCHANT, and R. J. WURTMAN.....	329
Obesity Types in Stone Age Art: A Study in Icono-Diagnosis. <i>By</i> A. A. PONTIUS.....	331
Macronutrient Intake and Mood during Weight-Reducing Diets. <i>By</i> U. SCHWEIGER, R. LAESSLE, and K. M. PIRKE	335
The Effect of Active Weight Loss Achieved by Dieting versus Exercise on Postheparin Hepatic and Lipoprotein Lipase Activity. <i>By</i> M. L. STEFANICK, B. FREY-HEWITT, C. A. HOOVER, R. B. TERRY, and P. D. WOOD	338
Body Composition in Obese Males. <i>By</i> A. N. VASWANI, S. H. COHN, K. J. ELLIS, J. YEH, and J. F. ALOIA.....	340
Summary and Forecast. <i>By</i> R. J. WURTMAN	343
Index of Contributors	349